

CLAIMS:

1. A security system for a retail environment including a merchandise display area, at least one entrance and at least one exit (which may be the same as the entrance), and at least one shopping trolley or the like, wherein the shopping trolley is fitted with a security device comprising a receive-only wireless receiver incorporating a processor, wherein the receiver is adapted to receive wireless signals from at least one transmitter located in the retail environment and the processor is adapted to analyse the received wireless signals so as to determine at least a location of the device within the retail environment, and wherein at least one transmitter is located at a predetermined choke point within the retail environment past which the shopping trolley or the like must travel before leaving through the exit and/or entrance.
2. A security system for a retail environment including a merchandise display area, at least one entrance and at least one exit (which may be the same as the entrance), and at least one shopping trolley or the like, wherein the shopping trolley is fitted with a security device comprising a wireless receiver incorporating a processor, wherein the receiver is adapted to receive wireless signals from at least one transmitter located in the retail environment and the processor is adapted to analyse the received wireless signals so as to determine at least a direction of travel of the device relative to the at least one transmitter.
3. A system as claimed in claim 1 or 2, wherein the processor is configured to issue an alarm signal when a predetermined signal or sequence of mutually identifiable signals is received from one or more transmitters.
4. A system as claimed in claim 3, wherein the security device further includes a transmitter, the transmitter being adapted to transmit a signal to a wheel locking device provided on the shopping trolley or the like when the alarm signal is issued.

5. A system as claimed in claim 4, wherein the transmitter is a low frequency wireless transmitter.
6. A system as claimed in claim 3, wherein the processor is hard-wired to a wheel locking device provided on the shopping trolley or the like and wherein the processor is adapted to transmit a signal to the wheel locking device when the alarm signal is issued.
7. A system as claimed in claim 3 or any claim depending therefrom, wherein the alarm signal causes an audible, visual or other alarm device to be activated.
8. A system as claimed in claim 7 depending from any one of claims 4 to 6, wherein the alarm device is configured to be activated in response to the alarm signal prior to activation of the wheel locking device.
9. A system as claimed in any preceding claim, wherein the processor is adapted to count a number of times the device passes a given at least one transmitter.
10. A system as claimed in claim 1 or any claim depending therefrom, wherein the processor is adapted to determine a direction of travel of the device past a given at least one transmitter.
11. A system as claimed in claim 3 or any claim depending therefrom, further including a timing device configured to suppress or delay issuance of the alarm signal for a predetermined time.
12. A system as claimed in claim 1 or any claim depending therefrom, wherein the retail environment includes at least one check out/payment point located between the merchandise display area and the at least one exit, and wherein the choke point is located outside the merchandise display area in a region between the at least one check out/payment point and the at least one exit.

13. A system as claimed in claim 1 or any claim depending therefrom, wherein the retail environment includes a canteen and/or a toilet facility located outside the merchandise display area, and wherein a choke point is provided at a boundary
5 between the merchandise display area and the canteen and/or toilet facility.

14. A system as claimed in any preceding claim, wherein the at least one transmitter includes a pair of coils or antennas or the like, each of the pair being adapted to transmit a mutually distinct signal so as to enable the processor to
10 determine a direction of travel of the security device relative to the at least one transmitter.

15. A system as claimed in claim 1 or any claim depending therefrom, wherein the at least one transmitter located at the choke point is configured to transmit
15 wireless signals to the wireless receiver that do not cause an alarm signal to be issued by the processor but instead provide location and/or direction of travel information.

16. A system as claimed in any preceding claim, wherein the at least one transmitter is provided with means to change characteristics of the transmitted signals
20 in predetermined ways that are recognised by the processor.

17. A system as claimed in any preceding claim, wherein all or at least some of the transmitters located in the retail environment are networked to a central
25 computer.

18. A system as claimed in any preceding claim, further provided with at least one hand-held remote control device adapted to issue wireless control signals to the security device and or the at least one transmitter.

30 19. A method of providing security in a retail environment including a merchandise display area, at least one entrance and at least one exit (which may be

the same as the entrance), and at least one shopping trolley or the like, wherein the shopping trolley is fitted with a security device comprising a receive-only wireless receiver incorporating a processor, wherein the receiver receives wireless signals from at least one transmitter located in the retail environment and the processor
5 analyses the received wireless signals and determines at least a location of the device within the retail environment, and wherein at least one transmitter is located at a predetermined choke point within the retail environment past which the shopping trolley or the like must travel before leaving through the exit and/or entrance.

10 20. A method of providing security in a retail environment including a merchandise display area, at least one entrance and at least one exit (which may be the same as the entrance), and at least one shopping trolley or the like, wherein the shopping trolley is fitted with a security device comprising a wireless receiver incorporating a processor, wherein the receiver receives wireless signals from at least
15 one transmitter located in the retail environment and the processor analyses the received wireless signals so as to determine at least a direction of travel of the device relative to the at least one transmitter.

21. A method according to claim 19 or 20, wherein the processor issues an alarm
20 signal when a predetermined signal or sequence of mutually identifiable signals is received from one or more transmitters.

22. A method according to claim 21, wherein the security device further includes a transmitter, the transmitter transmitting a signal to a wheel locking device provided
25 on the shopping trolley or the like when the alarm signal is issued.

23. A method according to claim 22, wherein the transmitter is a low frequency wireless transmitter.

30 24. A method according to claim 21, wherein the processor is hard-wired to a wheel locking device provided on the shopping trolley or the like and wherein the

processor transmits a signal to the wheel locking device when the alarm signal is issued.

25. A method according to claim 21 or any claim depending therefrom, wherein
5 the alarm signal causes an audible, visual or other alarm device to be activated.

26. A method according to claim 25 depending from any one of claims 22 to 24,
wherein the alarm device is activated in response to the alarm signal prior to
activation of the wheel locking device.

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27. A method according to any one of claims 19 to 26, wherein the processor
counts a number of times the device passes a given at least one transmitter.

28. A method according to claim 19 or any claim depending therefrom, wherein
15 the processor determines a direction of travel of the device past a given at least one
transmitter.

29. A method according to claim 21 or any claim depending therefrom, wherein a
timing device suppresses or delays issuance of the alarm signal for a predetermined
20 time.

30. A method according to claim 19 or any claim depending therefrom, wherein
the retail environment includes at least one check out/payment point located between
the merchandise display area and the at least one exit, and wherein the choke point is
25 located outside the merchandise display area in a region between the at least one
check out/payment point and the at least one exit.

31. A method according to claim 19 or any claim depending therefrom, wherein
the retail environment includes a canteen and/or a toilet facility located outside the
30 merchandise display area, and wherein a choke point is provided at a boundary
between the merchandise display area and the canteen and/or toilet facility.

32. A method according to any one of claims 19 to 31, wherein the at least one transmitter includes a pair of coils or antennas or the like, each of the pair being adapted transmitting a mutually distinct signal so as to enable the processor to
5 determine a direction of travel of the security device relative to the at least one transmitter.

33. A method according to claim 19 or any claim depending therefrom, wherein the at least one transmitter located at the choke point transmits wireless signals to the
10 wireless receiver that do not cause an alarm signal to be issued by the processor but instead provide location and/or direction of travel information.

34. A method according to any one of claims 19 to 33, wherein the at least one transmitter is provided with means to change characteristics of the transmitted signals
15 in predetermined ways that are recognised by the processor.

35. A method according to any one of claims 19 to 34, wherein all or at least some of the transmitters located in the retail environment are networked to a central computer.
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36. A method according to any one of claims 19 to 35, wherein there is provided at least one hand-held remote control device that issues wireless control signals to the security device and or the at least one transmitter.

25 37. A security device for a shopping trolley or the like, the device comprising a receive-only wireless receiver incorporating a processor, wherein the receiver is adapted to receive wireless signals from at least one transmitter and the processor is adapted to analyse the received wireless signals so as to determine at least a location of the device within a predetermined spatial area.
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38. A device as claimed in claim 37, wherein the processor is configured to issue an alarm signal when a predetermined signal or sequence of mutually identifiable signals is received from one or more transmitters.
- 5 39. A device as claimed in claim 38, further including a transmitter, wherein the transmitter is adapted to transmit a signal to a wheel locking device provided on the shopping trolley or the like when the alarm signal is issued.
40. A device as claimed in claim 39, wherein the transmitter is a low frequency
10 wireless transmitter.
41. A device as claimed in claim 38, wherein the processor is hard-wired to a wheel locking device provided on the shopping trolley or the like and wherein the processor is adapted to transmit a signal to the wheel locking device when the alarm
15 signal is issued.
42. A device as claimed in claim 38 or any claim depending therefrom, wherein the alarm signal causes an audible, visual or other alarm device to be activated.
- 20 43. A device as claimed in claim 42 depending from any one of claims 39 to 41, wherein the alarm device is configured to be activated in response to the alarm signal prior to activation of the wheel locking device.
44. A device as claimed in any one of claims 37 to 43, wherein the processor is
25 adapted to count a number of times the device passes a given at least one transmitter.
45. A device as claimed in any one of claims 37 to 44, wherein the processor is adapted to determine a direction of travel of the device past a given at least one transmitter.

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46. A device as claimed in claim 38 or any claim depending therefrom, further including a timing device configured to suppress or delay issuance of the alarm signal for a predetermined time.

5 47. A security device for a shopping trolley or the like, substantially as hereinbefore described with reference to the accompanying drawings.

48. A security system for a retail environment, substantially as hereinbefore described with reference to the accompanying drawings.

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49. A method of providing security in a retail environment, substantially as hereinbefore described with reference to the accompanying drawings.

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